

III. REMARKS

Features in the applicants' invention that are certainly not disclosed in Bar-David are at least those related to determining whether iterating over the channel estimate and/or the equalization result improve the result or cause divergence. Bar-David apparently assumes that iteration produces an improvement in the channel estimate in all cases - the present inventors have noticed that it is all too easy to make categorical assumptions like this without checking their validity. In order to show obviousness of these features, the Examiner has to refer to two other prior art publications, which are Desperben and Brink (note the error in number in section 5 of the Office Action). Of these, Desperben admittedly discloses using confidence thresholds, but only for accepting an equalization result. Brink discloses using the estimated quality of the received signal to determine the number of required iterations. However, both of these references are overly optimistic in stating that iteration will always improve the quality of the result, so deciding the number of iterations is only a question of how much the result should be improved. None of the references cited considers the question of what to do if the iterating process starts to diverge instead of nicely converging.

Another feature in the applicants' invention that at least in literal form is absent in all cited references is determining the number of iterations independently for the iterative channel estimation and iterative equalization processes. Since Bar-David is the only one to mention both iterative channel estimation and iterative equalization, and even there the matter is only mentioned briefly in one sentence, it is clear that nowhere is there any anticipation of this feature.

A yet another feature is that of weighting feedback information depending on the estimated reliability of the obtained decoding result. Bar-David mentions the possibility of using the soft decisions of a channel decoder as feedback, but these are not "weighting according to estimated reliability" (claims 1, 20 and 29).

One of the above features are in the independent claims.

Since the above limitations are not in Bar-David, the rejection of claims 1-3, 14, 20 and 26 under 35 U.S.C. §102 should be withdrawn.

Further, since these features are not suggested by the reference, these claims are not obvious in view of it.

Similarly, the remaining references (including the admitted prior art) fail to disclose the above features.

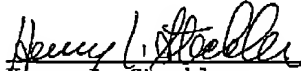
Thus, combining any of these references with Bar-David does not result in the present invention. Hence, the rejection of the remaining claims under 35 USC §103 should be withdrawn.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

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Respectfully submitted,


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